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## Getting Started

### Contents:

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### Introduction

The Ontario Geological Survey, Sedimentary Geoscience Section has compiled a GIS based, seamless surficial geology map for the Abitibi region. This compilation is based on existing 1:50 000 scale Quaternary maps available for the area. Map data are available in ArcMap® 9.x as coverages and completed *.mxd* project files. All datasets are in UTM Zone 17 NAD 83. Data can also be viewed in Google™ Earth using the free earth visualization tool available at <http://earth.google.com/>. The data and user documentation are available on 1 CD-ROM. This "getting started" document is intended to help clients begin to use the data. A license agreement document is located in the top or "root" folder.

### Compilation Area

The study area covers 26, 1: 50 000 scale map sheets in northeastern Ontario (Figure 1).

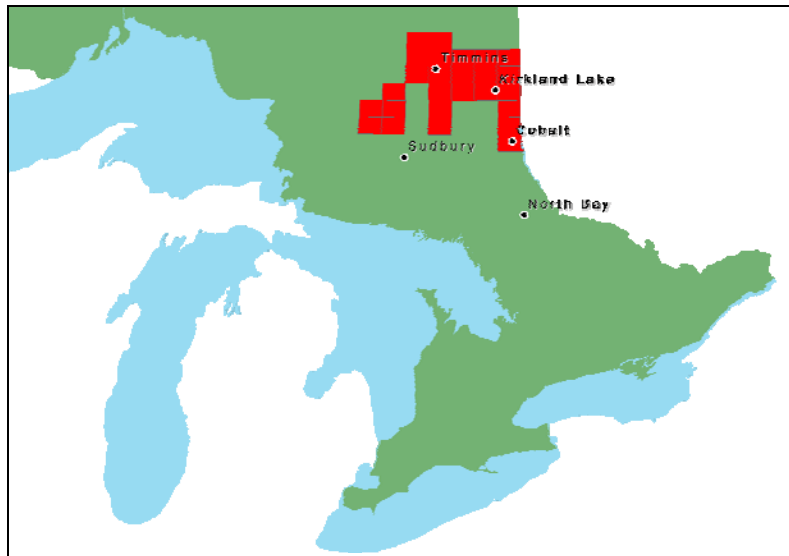


Figure 1. Location Map

## Data Sources

### Quaternary/surficial geology maps

The seamless map generated for the Abitibi compilation was compiled from published 1:50 000 and 1:100 000 scale OGS Quaternary/surficial geology maps. Maps used are shown in Table 1.

**Table 1:** Map list

Map Number	NTS Name	Publish Year	Scale	NTS Area
p3564	Pamour, Kamiskotia Lake, Manning Lake, Buskegau River	2005	1:100 000	42A/11, 42A/12, 42A/13, 42A/14
m2651	Lightning River	2000	1:50 000	32D/12
m2652	Matheson	2000	1:50 000	42A/09
m2659	Porquis Junction	2000	1:50 000	42A/10
m2648	Magusi River	2000	1:50 000	32D/05
m2660	Dana Lake	2001	1:50 000	42A/05
m2650	Ramore	2000	1:50 000	42A/08
m2662	Timmins	2001	1:50 000	42A/06
m2658	Watabeag River	2000	1:50 000	42A/07
m2671	Foleyet	2005	1:50 000	42B/01
m2647	Larder Lake	2000	1:50 000	32D/04
m2649	Kirkland Lake	2000	1:50 000	42A/01
m2610	Radisson Lake	2000	1:50 000	42A/02
m2611	Peterlong Lake	2000	1:50 000	42A/03
m2488	Rollo Lake	1998	1:50 000	41O/15
m2502	Rush Lake	1998	1:50 000	41O/16
m2661	Englehart	2009	1:50 000	31M/13
m2653	Sinclair Lake	2001	1:50 000	41P/14
m2489	Sultan	1998	1:50 000	41O/10
m2490	Opeepeesway Lake	1998	1:50 000	41O/09
m2657	New Liskeard	2009	1:50 000	31M/12
m2654	Shining Tree	2001	1:50 000	41P/11
m2685	Cobalt	2009	1:50 000	31M/05

## Using the data with ArcGIS® software:

The data may be accessed with ESRI® ArcGIS® 9.x software, including ArcView® 8.x, as follows.

- The project will run more efficiently from your hard drive.
- Copy the entire folder “Data” on the MRD263 CD to a location on your hard drive. The data will occupy about 330 MB of disk space.
- **The folder structure with the “data” folder must be maintained to properly view the data.**
- For the newly copied “data” folder right-click and uncheck the Read-only option check box.
- The 'Fonts' folder provided on this CD contains a font file required by ArcGIS® for symbolizing point features on the map. The font must be installed as follows, prior to viewing the data sets in ArcMap™. In Windows® 2000®, open the 'fonts' subdirectory in your 'winnt' directory, or click start, select Settings, then select 'Control Panel'. In the 'Control Panel' open the 'Fonts' folder, under 'File', click 'Install New Font' and map to the 'fonts' folder copied from the CD or simply copy the 'QUAT.TTF' file located in the 'fonts' folder and paste it into the 'fonts' subdirectory in your 'winnt' directory. For Windows® XP®, the font folder is located in c:\WINDOWS\Fonts. Click start, select Settings then select 'Control Panel'. In the 'Control Panel' open the 'Fonts' folder, under 'File' click 'Install New Font' and map to the 'fonts' folder copied from the CD.
- Use ArcGIS® to open one of the project file(s) provided on this CD. Open ArcMap™ and under 'File' click 'Open' and select the desired **mx**d. The ArcMap™ project files (mx

## Google Earth

The Google Earth directory contains a Google™ Earth file for the Surficial geology polygon data, point features as well as a shaded relief overlay. Google™ Earth is a free earth visualization tool available at <http://earth.google.com/>.

## Contents of the CD-ROM, map projections, scale and base map information:

All data is in the Universal Transverse Mercator (UTM), co-ordinate system, NAD 83 datum, zone 17.

Tables 2 and 3 detail the contents of the CD.

The base map, which was used in assembling the data, is the Ministry of Natural Resources' Land Information Ontario/ Natural Resource Values Information System base map.

## Data layers and attributes:

As can be seen in the ArcMap™ legend, there are many layers in the Quaternary Geology GIS map. Also, individual layers may have many attribute columns which can be used for visualizing or querying the data. The "layers" are ArcInfo "coverages", the data format traditionally used by ArcInfo.

**Table 2:** Contents of CD-ROM

Top Folder	Folder		Contents
Data			
	ArcGis		All ArcInfo coverages. (roads, lakes, rivers, index, sgu_poly, cochrane_lim, iceberg, ogs_pits, sgu_line, sgu_point, shade)
	Documentation		Project report (MRD 263 readme.doc and pdf)
			Data licence agreement

			Detailed metadata
	<b>fonts</b>		Font file required for point symbology. Must be loaded by user. (QUAT.TTF)
	<b>Google Earth</b>		Files for viewing data in Google™ Earth (abitibi.kml)
	<b>layerfiles</b>		Layer files used to display proper symbology in creating the mxd. (sgu_poly arc.lyr, sgu_poly polygon.lyr, ogs_pits point.lyr, sgu_line arc.lyr, sgu_point point.lyr, roads arc.lyr, lakes polygon.lyr)
	<b>Style_file</b>		Style file containing all symbols used to display map. (abitibi.style)
map8_3.mxd map9_9_1.mxd map9_2.mxd map9_3.mxd			Located in root folder. Double-click to view Surficial geology map.

**Table 3:** Map layers and selected attributes (ArcGis folder)

Layer	Attribute	Description
<b>sgu_poly</b>		Surficial geology unit polygons, which classify the Earth's surface by the surface or near-surface geological material.
	SINGLE_NEW_ID	The geological unit number assigned to the polygon, for example 1, 2, 5, 5a, 5b.
	SINGLE_PRIM_MAT	Single primary material. A single word providing information regarding the most prevalent material present within a given area, for example "sand".
	SINGLE_PMAT_MOD	Single primary material modifier. Provides a more refined, single-word description of the lithological classification of the primary material, for example "sandy".
	PRIM_MAT	Primary material. Provides information regarding the most prevalent material present within a given area, for example "silt, sand". Multiple words are allowed.
	PRIM_MAT_MOD	Primary material modifier. Provides a more refined description of the lithological classification of the primary material, for example "organic-bearing". Multiple words are allowed.
	SINGLE_PRIM_GEN	Single primary genesis. Provides an interpretation of the depositional environment within which the primary material was deposited, using single words, for example "glaciofluvial".
	FORMATION	Provides information regarding the formal geological formation to which

		a primary material belongs, for example "Cochrane Till".
	PERMEABILITY	Provides information about the permeability of the sediments in a rank from high, medium to low.
<b>sgu_point</b>		Captures oriented point information such as drumlins and striae.
	FEATURE_CODE	A character field containing a feature code such as drumlin or flute.
	ORIENTATION	A numeric field containing each feature's orientation. For example, for feature codes "strd", glacial striae, direction of ice movement known, this field contains a number from 0 to 360 degrees.
<b>sgu_line</b>		Captures oriented lines such as eskers and beaches.
	FEATURE_CODE	A character field containing a feature code such as "eskern", esker, direction of flow known or "bluff".
<b>cochrane_lim</b>	FEATURE_CODE	Captures the line defining the limit of the Cochrane advance.
<b>iceberg</b>	FEATURE_CODE	Captures the linear feature representing iceberg keel marks.
<b>ogs_pits</b>		Captures gravel pit and quarry locations.
<b>shade</b>		An image of the shaded relief derived from Ministry of Natural Resources' digital elevation model.
<b>Base layers (water, roads)</b>		From Land Information Ontario.

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Ontario Geological Survey  
**SURFICIAL GEOLOGY MAP COMPILATION OF  
 THE ABITIBI REGION**  
 NORTHERN ONTARIO

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 Sedimentary Geoscience Section, Ontario Geological Survey.



Location Map

**SOURCES OF INFORMATION**

Base map: Natural Resources and Values Information System (NRVIS)

Projection: NAD 83

**CREDITS**

Author: The Ontario Geological Survey

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**LEGEND**

**PHANEROZOIC**

**CENOZOIC**

**QUATERNARY**

**RECENT**

- 16** **Man-Made Deposits:** mine tailings and rock waste, landfill and wood waste
- 15** **Organic Deposits:** peat, muck
- 14** **Modern Alluvial Deposits:** clay, silt, sand, gravel, may contain organic remains

- 13** **Lacustrine Beach Deposits:** pebbly sand, gravel

- 12** **Eolian Deposits:** fine- to very- fine sand and silt

**PLEISTOCENE**

- 11** **Older Alluvial Deposits:** clay, silt, sand, gravel, may contain organic remains

- 10** **Till (Cochrane Formation):** clayey silt till

- 9** **Glaciolacustrine Beach and Bar Deposits:** pebbly sand, gravel

- 8** **Glaciolacustrine Coarse- Grained Deposits:** sand, gravel, minor silt and clay  
 8a Modified by wind

- 7** **Glaciolacustrine Fine-Grained Deposits:** massive to varved silt, clay

- 6** **Glaciofluvial Deposits:** undifferentiated sand and gravel  
 6a Mainly sand  
 6b Sand and gravel

- 5** **Ice-Contact Stratified Deposits:** sand and gravel, minor silt, clay and till  
 5a In moraines, eskers, kames and crevasse fills  
 5b Subaquatic fans  
 5c Deltas

- 4** **Till (Matheson and Adam Formations):** stony, silty sand till

**PALEOZOIC**






































- 3** **Paleozoic bedrock**

**PRECAMBRIAN**

- 2** **Bedrock-drift complex**  
 2a Mainly till over bedrock  
 2b Mainly stratified sediment over bedrock  
 2c Glaciolacustrine fine-grained deposits over bedrock  
 2d Glaciolacustrine coarse-grained deposits over bedrock

- 1** **Precambrian bedrock**

**SYMBOLS**

	Beach ridges and near shore bars		Ice-contact slope		Location of quarry		Kimberlite pipe
	Shore bluff or scarp		Abandoned meltwater channel or river, terrace escarpment		Sand and gravel pit		Radiocarbon age date location
	Crevasse filling		Wash limit		Stoss and lee feature; crag and tail		Sample site
	Crests of large sand dune (eolian)		Iceberg keel mark		Drumlin or drumlinoid ridges		Small landslide scar
	End moraine		Cochrane limit		Glacial fluting		Talus
	Degeer moraine		Abandoned channel		Kettle		Past producing mine
	Minor moraine		Bedrock escarpment		Outcrop		Peat and muck pit
	Esker, direction of flow known		Edge of mapable landslide scar		Glacial striae; direction of ice movement known		Geotechnical or stratigraphic borehole
	Meltwater channel; inferred direction of flow		Mining trenches		Kimberlite boulder		
	Meltwater channel; direction of flow unknown		Geologic contact				
	Outline of "forest ring"		Meltwater flow; inferred direction of flow				